

## **ABSTRACT OF THE DISCLOSURE**

Presently preferred embodiments of the current invention are directed to a protocol analyzer for interpreting data frames captured on a communications network. The protocol analyzer includes a network interface connection for providing the electrical and physical connection to the communications network and for receiving data frames from the network in a particular physical layer protocol format. The protocol analyzer further includes analysis software for providing an interpretation of received data frames. The interpretation of a frame is based upon a series of definition constructs that are stored in a protocol definition file and a protocol database of the protocol analyzer. The definition constructs collectively define the characteristics of a data frame for a given physical layer protocol. Also, the constructs provide a means for identifying any one of a number of higher level protocols that may be embedded within the data frame.

Also disclosed is a graphical user interface for use as a protocol editor for assembling the necessary definition constructs for inclusion in a protocol definition file. Further, embodiments of a graphical interface for displaying the results of interpreted frames is also disclosed.

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WORKMAN, NYDEGGER & SEELEY

A PROFESSIONAL CORPORATION

ATTORNEYS AT LAW

1000 EAGLE GATE TOWER

60 EAST SOUTH TEMPLE

SALT LAKE CITY, UTAH 84111